

A large, ornate sundial sculpture stands in a lush green lawn. The sundial has a decorative stone base with intricate carvings and a metal frame with several intersecting rings. The background is filled with dense green trees and a clear blue sky.

# Healing TIME

by Ginny Gaylor

*The Sundial Garden's centerpiece gets a makeover.*





PHOTOGRAPHY: (OPPOSITE PAGE) COURTESY OF WINTERTHUR; (THIS PAGE) JIM GRAHAM



The Heritage Metalworks team (above, left to right): Mike White; Devin Campbell; Dave Kozak; Matt White. The original sundial prior to being damaged (opposite page).

For almost 50 years, an armillary sundial has presided over the Sundial Garden, becoming an iconic image for the estate. The only garden at Winterthur named for an object, the area was once the site of the family tennis courts and croquet lawn.

The Sundial Garden's history began in 1955 when Henry Francis du Pont asked his good friend, professional landscape architect Marian Coffin, to design a plan for the former sporting grounds. Originally known as the April Shrub Garden, its name changed two years later when du Pont relocated the sundial to the site, removing it from the former rose garden once tended by his mother.

Over time, the plantings changed, but the sundial remained a constant until Mother Nature decided otherwise. A windstorm in late fall 2004 uprooted the sundial's bronze component, damaging the hour section. Conservationists decided it would be best to preserve the original in storage and have reproductions made of the sundial and its base for use in the garden.

### *Chance Meetings*

Some encounters happen for a reason. When Kristin DeMesse, Winterthur's business development manager for licensed products, first met Jon White of Heritage Metalworks at a building show in spring 2003, she was impressed by the quality of

the Downingtown, Pennsylvania, company's work. But she felt they weren't quite big enough to handle projects of the scale that Winterthur often requires.

Heritage Metalworks grew, and in early 2004 Winterthur asked the company to work on a special project. The collaboration led to discussions of creating a licensed collection of metalwork objects for the home and garden. Always seeking to expand the line of Winterthur-inspired products for today's consumer, DeMesse and colleague Cathy Maxwell work with two dozen manufacturers to target designs based on the museum, garden, and library collections.

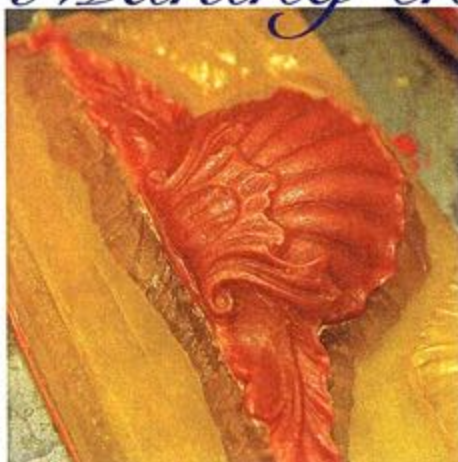
When the armillary sundial was damaged later that year, DeMesse turned to Heritage Metalworks for help. "At first we planned on just replacing the sundial with a copy," says DeMesse, "but the company's craftspeople thought it was such a magnificent piece. They really wanted to add it to the licensed line."

Working with Winterthur was an easy decision for Heritage Metalworks. "Winterthur has thousands of objects and artifacts that represent the history of U.S. architecture and design—we specialize in making historical reproductions," says Dave Kozak, marketing director for Heritage Metalworks.

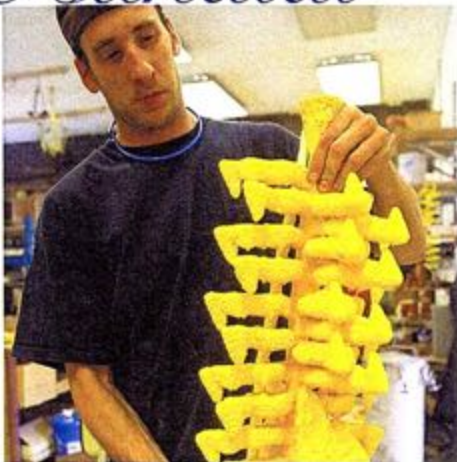
Re-creating any historic item is an ambitious undertaking. Heritage Metalworks first measured the piece. They sculpted a mold. The cast mold was filled



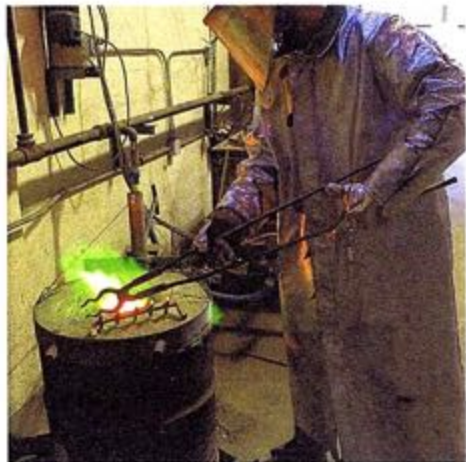
# Making the sundial



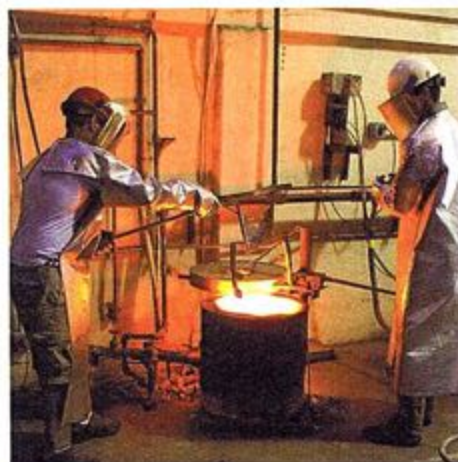
1 Artisans create a wax mold for what will be a decorative bronze shell.



2 Matt White inspects the tree mold (a group of connected molds) prior to the casting process.



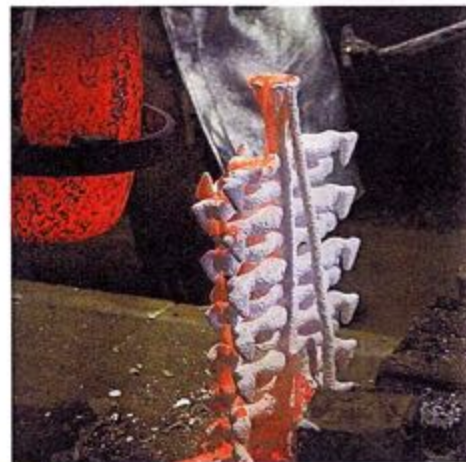
3 White heats the bronze to the proper temperature in the furnace.



4 White and Matt Kulp prepare to lift the crucible from the furnace.



5 Molten bronze is carefully poured from the crucible into a prepped ceramic shell.



6 The molten bronze, recently poured from the red-hot crucible, cools inside the tree mold.



7 White gently hammers the shell away to reveal the newly cast piece.



8 The decorative bronze shell is ready for mounting on the new sundial.



9 The finished decorative bronze shell is attached to the sundial.



with wax and covered with sand and a slurry mix (an adhesive, cement-like substance) and allowed to harden. Next, the piece was heated in a kiln until the wax melted out, leaving a hardened shell. Finally, molten metal was poured into the mold and left to cool. Once the metal had cooled, the shell was broken away to reveal the finished object—a 59-inch, 70-pound sundial sphere.

### ***A Strong Foundation***

"The sundial is a unique piece because it is functional as well as decorative," explains Kozak. "You have to be meticulous when making it, and the measurements must be spot on. If they're slightly off, it won't work." An important aspect of this attention to detail is the base. "The cast base has to be perfectly level," says Kozak.

A. Thayer Smith III, another local artisan, was tapped to reproduce the cast base of the sundial. "We had the existing base, so I photo-documented it and did a field study to get the size and shape of things," says Smith. The new base was cast using a composite material that looks like stone but is in fact much lighter in weight. The result: A 40-inch-tall limestone-like base weighing only 150 pounds.

### ***New Beginnings***

Come spring, the Sundial Garden will again offer up its seasonal display of magnolias, cherry trees, spirea, viburnum, quince, and fothergilla in soft shades of pink and white, culminating in a display of lilacs in late April. Representative of du Pont's overall concept for his 60-acre garden, the Sundial Garden showcases a succession of blooms, allowing each part of the garden its moment in the spotlight. The sundial is the centerpiece of this unfolding floral show.

Two years after the destructive storm, the completed reproduction sundial has been placed in its rightful home. DeMesse sums up the experience, "It's exciting to see that craftsmanship still lives. These companies don't cut corners; they use time-honored techniques, and they are really artists." Today Winterthur staff and visitors alike have two local artisans to thank for creating a faithful reproduction of this integral garden ornament. ❖



For more information or to purchase reproductions of the sundial (\$4,500) and its base (\$1,500), call the Museum Store at 800.448.3883 ext. 4822 or 302.888.4822. Members receive a 10% discount. Proceeds from the sale of licensed products support educational programming at Winterthur.

Since August, the sundial replica and its base have presided over the Sundial Garden.